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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 4	DEC 18	CA/CAplus patent kind codes updated
NEWS 5	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 6	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 7	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS 8	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 9	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS 10	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS 11	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 12	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 13	JAN 22	CA/CAplus enhanced with patent applications from India
NEWS 14	JAN 29	PHAR reloaded with new search and display fields
NEWS 15	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 16	FEB 15	PATDPASPC enhanced with Drug Approval numbers
NEWS 17	FEB 15	RUSSIAPAT enhanced with pre-1994 records
NEWS 18	FEB 23	KOREAPAT enhanced with IPC 8 features and functionality
NEWS 19	FEB 26	MEDLINE reloaded with enhancements
NEWS 20	FEB 26	EMBASE enhanced with Clinical Trial Number field
NEWS 21	FEB 26	TOXCENTER enhanced with reloaded MEDLINE
NEWS 22	FEB 26	IFICDB/IFIPAT/IFIUDB reloaded with enhancements
NEWS 23	FEB 26	CAS Registry Number crossover limit increased from 10,000 to 300,000 in multiple databases
NEWS 24	MAR 15	WPIDS/WPIX enhanced with new FRAGHITSTR display format
NEWS 25	MAR 16	CASREACT coverage extended
NEWS 26	MAR 20	MARPAT now updated daily
NEWS 27	MAR 22	LWPI reloaded
NEWS 28	MAR 30	RDISCLOSURE reloaded with enhancements
NEWS 29	MAR 30	INPADOCDB will replace INPADOC on STN
NEWS 30	APR 02	JICST-EPLUS removed from database clusters and STN

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

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FILE 'HOME' ENTERED AT 14:22:02 ON 16 APR 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5
DICTIONARY FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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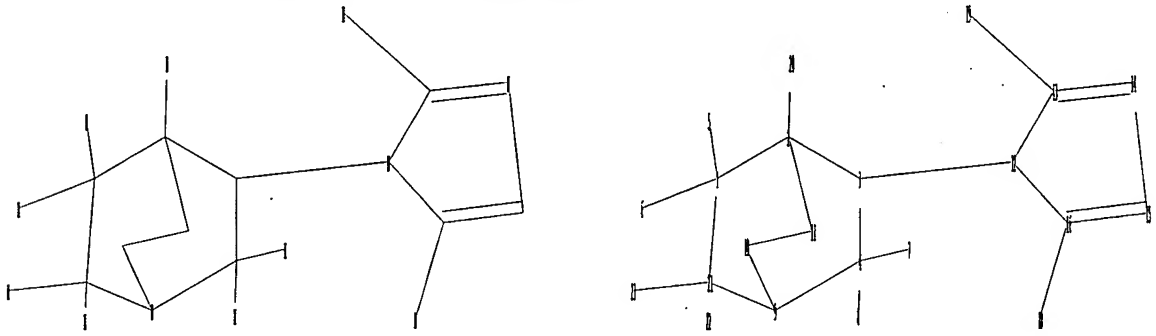
Uploading C:\Program Files\Stnexp\Queries\10579609.str



chain nodes :
5 6 7 8 18 19 20 22 23
ring nodes :
1 2 3 4 9 10 11 12 13 14 15 16 21
chain bonds :
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ring bonds :
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exact/norm bonds :
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exact bonds :
1-6 1-5 2-20 4-8 4-7 13-19 15-16 16-18 21-22 21-23
isolated ring systems :
containing 12 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 18:CLASS 19:CLASS 20:CLASS
21:Atom 22:CLASS 23:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
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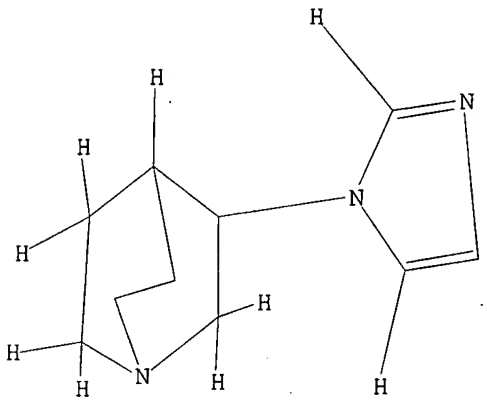

Structure attributes must be viewed using STN Express query preparation.

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FULL SEARCH INITIATED 14:22:41 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 319 TO ITERATE

100.0% PROCESSED 319 ITERATIONS 13 ANSWERS
SEARCH TIME: 00.00.01

L2 13 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 172.10 172.31

FILE 'CAPLUS' ENTERED AT 14:22:52 ON 16 APR 2007
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FILE COVERS 1907 - 16 Apr 2007 VOL 146 ISS 17
FILE LAST UPDATED: 15 Apr 2007 (20070415/ED)

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=> s l2 full
L3 2 L2

=> d ibib abs hitstr tot

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:472155 CAPLUS
DOCUMENT NUMBER: 143:7863
TITLE: Preparation of 1-(azabicyclyl)-4-substituted-imidazoles for use in pharmaceutical compositions as α4 and α7 nicotinic acetylcholine receptor (nAChR) agonists
INVENTOR(S): Empfield, James; Phillips, Eifion; Throner, Scott
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2005049612	A1	20050602	WO 2004-SE1660		20041115
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
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EP 1687303	A1	20060809	EP 2004-800323		20041115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR, IS					
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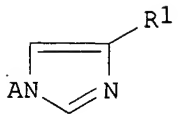
BR 2004016629	A	20070116	BR 2004-16629		20041115
NO 2006002862	A	20060821	NO 2006-2862		20060619
PRIORITY APPLN. INFO.:			SE 2003-3075	A	20031119
			WO 2004-SE1660	W	20041115

OTHER SOURCE(S): CASREACT 143:7863; MARPAT 143:7863
GI



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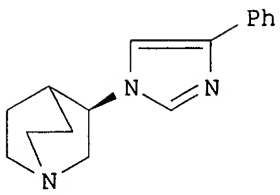


II

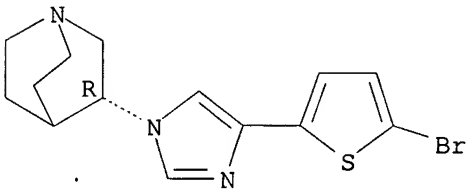
AB Azabicyclyl-midazole derivs., such as I [A = azabycyclyl, such as 3-quinuclidinyl, or 1-azabicyclo[2.2.1]heptan-3-yl; R1 = aryl, heteroaryl], were prepared for therapeutic use as α4 and α7 nAChR agonists. These imidazoles are claimed for use in the treatment of ulcerative colitis, as well as for use in the treatment or prophylaxis of neurol. disorders, psychotic disorders or intellectual impairment disorders, such as Alzheimer's disease, learning deficit, cognition deficit, attention deficit, memory loss, attention deficit hyperactivity disorder, Parkinson's disease, Huntington's disease, Tourette's syndrome, neurodegenerative disorders in which there is loss of cholinergic synapses, jetlag, nicotine addiction, craving, pain, anxiety, schizophrenia, mania or manic depression. Thus, (R)-3-(4-phenylimidazol-1-yl)-1-azabicyclo[2.2.2]octane (II) was prepared with 41% yield by cyclization of phenylglyoxal hydrate with (R)-(+)-3-aminoquinuclidine dihydrochloride, ammonium acetate and formaldehyde in AcOH. The prepared imidazoles were assayed for binding affinity to the α4 and α7 nAChR subtypes using rat hippocampi.

IT 852619-30-8P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of 1-(azabicyclyl)-4-substituted-imidazoles for use in pharmaceutical compns. as α4 and α7 nicotinic acetylcholine receptor (nAChR) agonists)

RN 852619-30-8 CAPLUS

CN 1-Azabicyclo[2.2.2]octane, 3-[4-(5-bromo-2-thienyl)-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

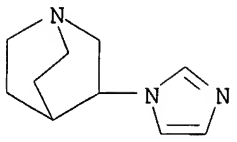
Absolute stereochemistry.



IT 852619-19-3P 852633-60-4P, (R)-3-(4-Phenylimidazol-1-yl)-1-azabicyclo[2.2.2]octane 852633-62-6P 852633-65-9P 852633-67-1P 852633-68-2P 852633-70-6P 852633-72-8P 852633-74-0P 852633-76-2P 852633-78-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 1-(azabicyclyl)-4-substituted-imidazoles for use in pharmaceutical compns. as α4 and α7 nicotinic acetylcholine receptor (nAChR) agonists)

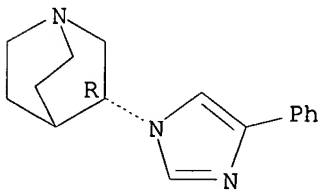
RN 852619-19-3 CAPLUS

CN 1-Azabicyclo[2.2.2]octane, 3-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



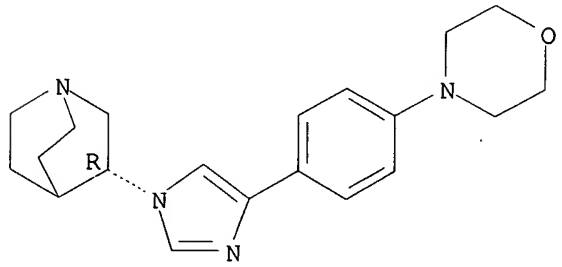
RN 852633-60-4 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-(4-phenyl-1H-imidazol-1-yl)-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



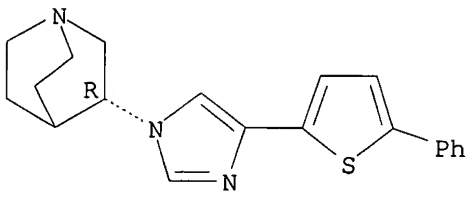
RN 852633-62-6 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-[4-(4-morpholinyl)phenyl]-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 852633-65-9 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-(5-phenyl-2-thienyl)-1H-imidazol-1-yl]-, dihydrochloride, (3R)- (9CI) (CA INDEX NAME)

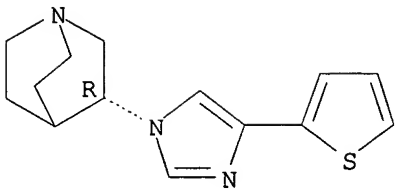
Absolute stereochemistry.



●2 HCl

RN 852633-67-1 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-(2-thienyl)-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

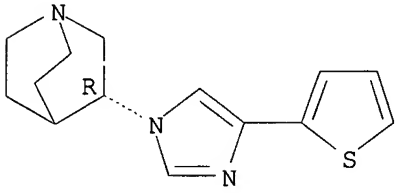


RN 852633-68-2 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-(2-thienyl)-1H-imidazol-1-yl]-, (3R)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 852633-67-1
CMF C14 H17 N3 S

Absolute stereochemistry.



CM 2

CRN 76-05-1
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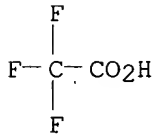
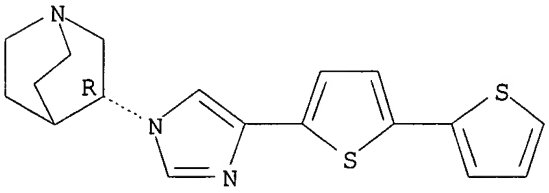


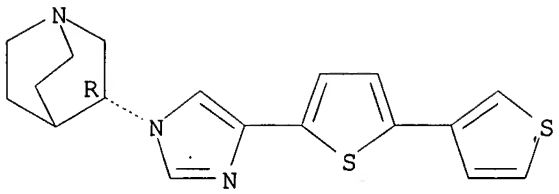
RN 852633-70-6 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-(4-[2,2'-bithiophen]-5-yl-1H-imidazol-1-yl)-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



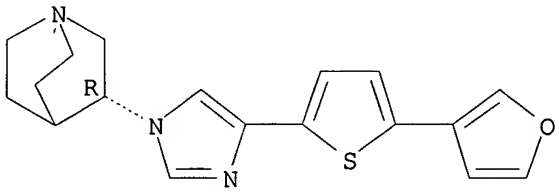
RN 852633-72-8 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-(4-[2,3'-bithiophen]-5-yl-1H-imidazol-1-yl)-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



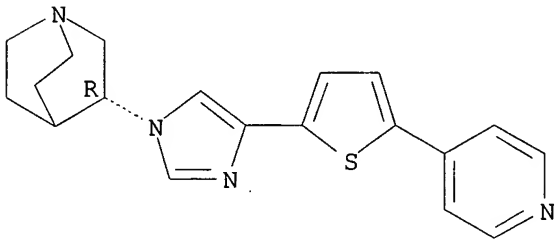
RN 852633-74-0 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-[5-(3-furanyl)-2-thienyl]-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



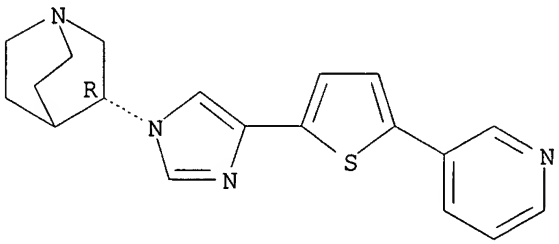
RN 852633-76-2 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-[5-(4-pyridinyl)-2-thienyl]-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 852633-78-4 CAPLUS
CN 1-Azabicyclo[2.2.2]octane, 3-[4-[5-(3-pyridinyl)-2-thienyl]-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:472154 CAPLUS
DOCUMENT NUMBER: 143:7862

TITLE: Preparation of 1-(azabicyclyl)-5-substituted-imidazoles for use in pharmaceutical compositions as α4 and α7 nicotinic acetylcholine receptor (nAChR) agonists

INVENTOR(S): Empfield, James; Phillips, Eifion; Throner, Scott
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.

SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005049611	A1	20050602	WO 2004-SE1659	20041115
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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CN 1882583	A	20061220	CN 2004-80034236	20041115
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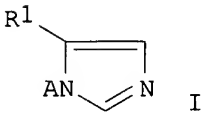
PRIORITY APPLN. INFO.: SE 2003-3076 A 20031119
WO 2004-SE1659 W 20041115

OTHER SOURCE(S): CASREACT 143:7862; MARPAT 143:7862

GI



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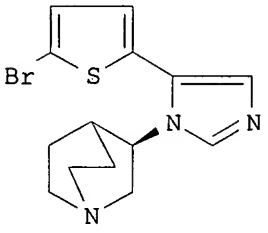


II

AB Azabicyclyl-imidazole derivs., such as I [A = azabycyclyl, such as 3-quinuclidinyl, or 1-azabicyclo[2.2.1]heptan-3-yl; R1 = aryl, heteroaryl], were prepared for therapeutic use as α4 and α7 nAChR agonists. These imidazoles are claimed for use in the treatment of ulcerative colitis, as well as for use in the treatment or prophylaxis of neurol. disorders, psychotic disorders or intellectual impairment disorders, such as Alzheimer's disease, learning deficit, cognition deficit, attention deficit, memory loss, attention deficit hyperactivity disorder, Parkinson's disease, Huntington's disease, Tourette's syndrome, neurodegenerative disorders in which there is loss of cholinergic synapses, jetlag, nicotine addiction, craving, pain, anxiety,

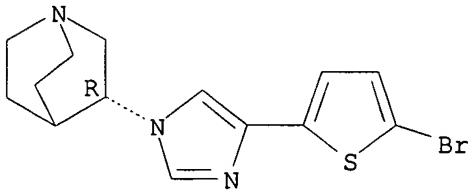
schizophrenia, mania or manic depression. Thus, (R)-3-[5-(5-bromothiophen-2-yl)imidazol-1-yl]-1-azabicyclo[2.2.2]octane (II) was prepared via dihydroxylation of 2-acetyl-5-bromothiophene using SeO2 in H2O and 1,4-dioxane to form the intermediate glyoxal hydrate, 1-(5-bromothiophen-2-yl)-2,2-dihydroxyethanone, in 73% yield, and subsequent cyclization of the glyoxal hydrate with (R)-(+)-3-aminoquinuclidine dihydrochloride, ammonium acetate and formaldehyde in AcOH and H2O to give the desired II in 33% yield. The prepared imidazoles were assayed for binding affinity to the α4 and α7 nAChR subtypes using rat hippocampi.

IT 852619-30-8P
RL: BYP (Byproduct); PREP (Preparation)
(preparation of 1-(azabicyclyl)-5-substituted-imidazoles for use in pharmaceutical compns. as α4 and α7 nicotinic acetylcholine receptor (nAChR) agonists)

RN 852619-30-8 CAPLUS

CN 1-Azabicyclo[2.2.2]octane, 3-[4-(5-bromo-2-thienyl)-1H-imidazol-1-yl]-, (3R)- (9CI) (CA INDEX NAME)

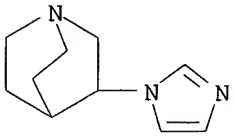
Absolute stereochemistry.



IT 852619-19-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 1-(azabicyclyl)-5-substituted-imidazoles for use in pharmaceutical compns. as α4 and α7 nicotinic acetylcholine receptor (nAChR) agonists)

RN 852619-19-3 CAPLUS

CN 1-Azabicyclo[2.2.2]octane, 3-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 14:22:02 ON 16 APR 2007)

FILE 'REGISTRY' ENTERED AT 14:22:10 ON 16 APR 2007
L1 STRUCTURE UPLOADED
L2 13 S L1 FULL

FILE 'CAPLUS' ENTERED AT 14:22:52 ON 16 APR 2007
L3 2 S L2 FULL

=> log y
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST	12.89	185.20
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.56	-1.56

STN INTERNATIONAL LOGOFF AT 14:25:47 ON 16 APR 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 4	DEC 18	CA/CAplus patent kind codes updated
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NEWS 6	DEC 18	MEDLINE updated in preparation for 2007 reload
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NEWS 9	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
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NEWS 12	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 13	JAN 22	CA/CAplus enhanced with patent applications from India
NEWS 14	JAN 29	PHAR reloaded with new search and display fields
NEWS 15	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 16	FEB 15	PATDPASPC enhanced with Drug Approval numbers
NEWS 17	FEB 15	RUSSIAPAT enhanced with pre-1994 records
NEWS 18	FEB 23	KOREAPAT enhanced with IPC 8 features and functionality
NEWS 19	FEB 26	MEDLINE reloaded with enhancements
NEWS 20	FEB 26	EMBASE enhanced with Clinical Trial Number field
NEWS 21	FEB 26	TOXCENTER enhanced with reloaded MEDLINE
NEWS 22	FEB 26	IFICDB/IFIPAT/IFIUDB reloaded with enhancements
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NEWS 28	MAR 30	RDISCLOSURE reloaded with enhancements
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NEWS 30	APR 02	JICST-EPLUS removed from database clusters and STN

NEWS EXPRESS	NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:27:56 ON 16 APR 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 14:28:18 ON 16 APR 2007
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STRUCTURE FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5
DICTIONARY FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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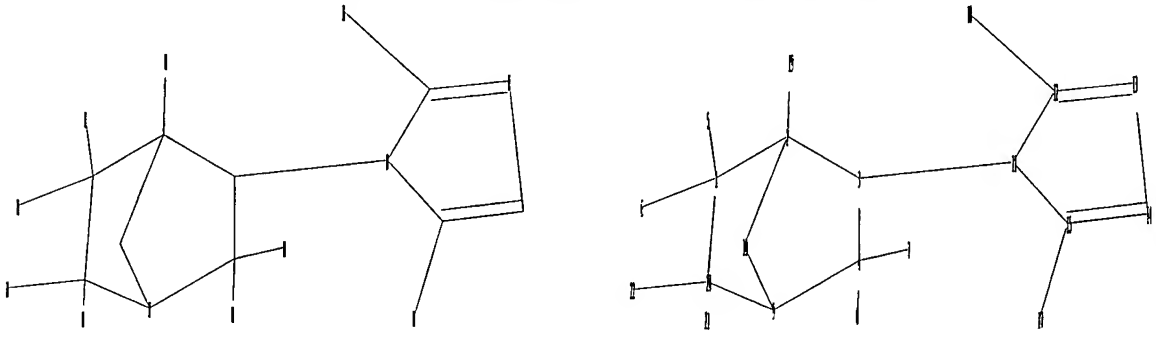
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10579609a.str



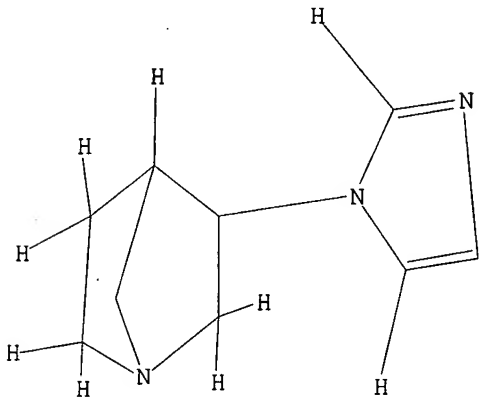
chain nodes :
5 6 7 8 17 18 19 21 22
ring nodes :
1 2 3 4 9 10 11 12 13 14 15 20
chain bonds :
1-6 1-5 2-19 3-11 4-8 4-7 12-18 15-17 20-21 20-22
ring bonds :
1-2 1-20 2-3 2-10 3-4 4-9 9-20 9-10 11-12 11-15 12-13 13-14 14-15
exact/norm bonds :
1-2 1-20 2-3 2-10 3-4 3-11 4-9 9-20 9-10 11-12 11-15 12-13 13-14
exact bonds :
1-6 1-5 2-19 4-8 4-7 12-18 14-15 15-17 20-21 20-22

isolated ring systems :
containing 11 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 17:CLASS 18:CLASS 19:CLASS 20:Atom
21:CLASS 22:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full
FULL SEARCH INITIATED 14:28:51 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 156 TO ITERATE

100.0% PROCESSED 156 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L2 0 SEA SSS FUL L1

=> log y
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 172.10 172.31

STN INTERNATIONAL LOGOFF AT 14:28:59 ON 16 APR 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	19	FEB 26	MEDLINE reloaded with enhancements
NEWS	20	FEB 26	EMBASE enhanced with Clinical Trial Number field
NEWS	21	FEB 26	TOXCENTER enhanced with reloaded MEDLINE
NEWS	22	FEB 26	IFICDB/IFIPAT/IFIUDB reloaded with enhancements
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NEWS	24	MAR 15	WPIDS/WPIX enhanced with new FRAGHITSTR display format
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NEWS	26	MAR 20	MARPAT now updated daily
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NEWS	28	MAR 30	RDISCLOSURE reloaded with enhancements
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NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:18:41 ON 16 APR 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 14:18:50 ON 16 APR 2007
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STRUCTURE FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5
DICTIONARY FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5

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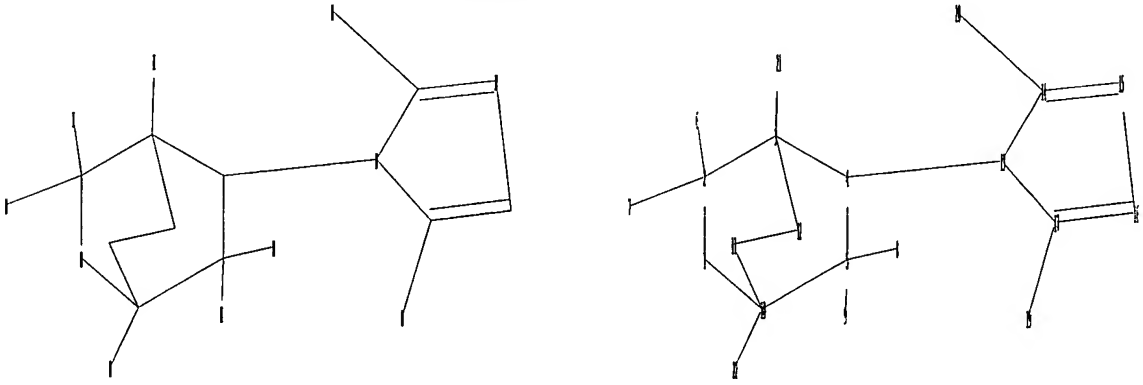
http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10579609c.str



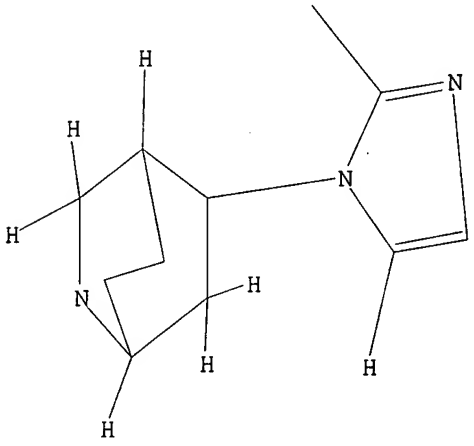
chain nodes :
6 7 8 9 19 20 21 22
ring nodes :
1 2 3 4 5 10 11 12 13 14 15 16 17
chain bonds :
2-6 2-7 3-21 4-13 5-9 5-8 10-22 14-20 17-19
ring bonds :
1-10 1-2 2-3 3-4 3-12 4-5 5-10 10-11 11-12 13-14 13-17 14-15 15-16 16-17
exact/norm bonds :

1-10 1-2 2-3 3-4 3-12 4-5 4-13 5-10 10-11 11-12 13-14 13-17 14-15
15-16
exact bonds :
2-6 2-7 3-21 5-9 5-8 10-22 14-20 16-17 17-19
isolated ring systems :
containing 1 : 13 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 19:CLASS 20:CLASS
21:CLASS 22:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 14:19:21 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 2425 TO ITERATE

82.5% PROCESSED 2000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 45547 TO 51453
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 14:19:26 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 47973 TO ITERATE

100.0% PROCESSED 47973 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

```
L3              0 SEA SSS FUL L1

=> log y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   172.10     172.31

STN INTERNATIONAL LOGOFF AT 14:19:29 ON 16 APR 2007
```

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LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:33:52 ON 16 APR 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 14:34:00 ON 16 APR 2007
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STRUCTURE FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5
DICTIONARY FILE UPDATES: 15 APR 2007 HIGHEST RN 930272-82-5

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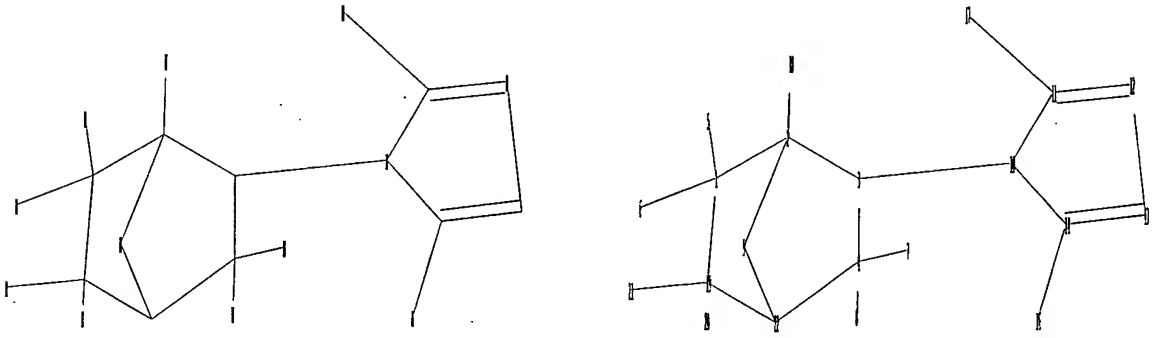
http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10579609b.str



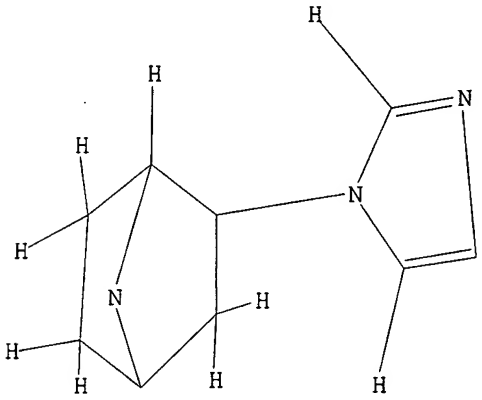
chain nodes :
5 6 7 8 16 17 18 20 21
ring nodes :
1 2 3 4 9 10 11 12 13 14 19 22
chain bonds :
1-6 1-5 2-18 3-10 4-8 4-7 11-17 14-16 19-21 19-20
ring bonds :
1-2 1-19 2-3 2-9 3-4 4-22 9-22 10-11 10-14 11-12 12-13 13-14 19-22
exact/norm bonds :
1-2 1-19 2-3 2-9 3-4 3-10 4-22 9-22 10-11 10-14 11-12 12-13 19-22
exact bonds :
1-6 1-5 2-18 4-8 4-7 11-17 13-14 14-16 19-21 19-20

isolated ring systems :
containing 10 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 16:CLASS 17:CLASS 18:CLASS 19:Atom
20:CLASS 21:CLASS 22:Atom

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full
FULL SEARCH INITIATED 14:34:27 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2663 TO ITERATE

100.0% PROCESSED 2663 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L2 0 SEA SSS FUL L1

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.10	172.31

STN INTERNATIONAL LOGOFF AT 14:34:30 ON 16 APR 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 21	FEB 26	TOXCENTER enhanced with reloaded MEDLINE
NEWS 22	FEB 26	IFICDB/IFIPAT/IFIUDB reloaded with enhancements
NEWS 23	FEB 26	CAS Registry Number crossover limit increased from 10,000 to 300,000 in multiple databases
NEWS 24	MAR 15	WPIDS/WPIX enhanced with new FRAGHITSTR display format
NEWS 25	MAR 16	CASREACT coverage extended
NEWS 26	MAR 20	MARPAT now updated daily
NEWS 27	MAR 22	LWPI reloaded
NEWS 28	MAR 30	RDISCLOSURE reloaded with enhancements
NEWS 29	MAR 30	INPADOCDB will replace INPADOC on STN
NEWS 30	APR 02	JICST-EPLUS removed from database clusters and STN

NEWS EXPRESS	NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

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FILE LAST UPDATED: 15 Apr 2007  (20070415/ED)

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http://www.cas.org/infopolicy.html

=> s nicotinic acetylcholin? receptor?
         37853 NICOTINIC
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         37854 NICOTINIC
                 (NICOTINIC OR NICOTINICS)
         93499 ACETYLCHOLIN?
        828333 RECEPTOR?
L1        6901 NICOTINIC ACETYLCHOLIN? RECEPTOR?
                 (NICOTINIC(W)ACETYLCHOLIN?(W)RECEPTOR?)

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L3          65 L2 AND DEPRESSION?

=> s l3 and anxiety
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            47 ANXIETIES
         16801 ANXIETY
                 (ANXIETY OR ANXIETIES)
L4          15 L3 AND ANXIETY

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L4   ANSWER 1 OF 15  CAPLUS  COPYRIGHT 2007 ACS on STN
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ACCESSION NUMBER: 2004:80353 CAPLUS
DOCUMENT NUMBER: 140:128284
TITLE: Preparation of 2,6-distyrylpiperidines as modulators of nicotinic acetylcholine receptor mediated neurotransmitter release, uptake and storage
INVENTOR(S): Crooks, Peter A.; Dwoskin, Linda; Miller, Dennis Keith; Grinevich, Vladimir P.; Norrholm, Seth Davin; Zheng, Guangrong
PATENT ASSIGNEE(S): University of Kentucky Research Foundation, USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. 6,455,543.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
US 2004019081	A1	20040129	US 2002-163633		20020607	
US 6703406	B2	20040309				
US 6455543	B1	20020924	US 2000-628557		20000728	<--
PRIORITY APPLN. INFO.:			US 1999-146144P	P	19990730	
			US 2000-628557	A2	20000728	

OTHER SOURCE(S): MARPAT 140:128284
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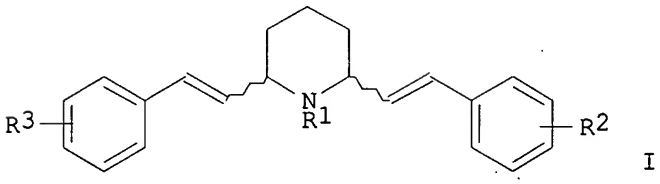

I

AB Title compds. [I; R1 = H, Me, CD3, CT3, Et, alkyl cycloalkyl, vinyl, allyl, alkenyl, benzyl, phenylethyl; R2, R3 = H , Me, Et, alkyl, cycloalkyl, vinyl, allyl, alkenyl, benzyl, phenylethyl, etc.], were prepared Thus, L-lobeline hemisulfate was stirred with NaBH4 in EtOH at 0° for 1 h to give lobelandine. The latter was stirred 24 h in 85% H3PO4 to give cis-2,6-di-trans-styrylpiperidine (II) and the trans-isomer. II inhibited nicotine-evoked [3H]-dopamine overflow at α3β2 receptors with IC50 = 0.03 μM.

L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:3665 CAPLUS
DOCUMENT NUMBER: 140:77298
TITLE: Preparation of 3-substituted-2(arylalkyl)-1-azabicycloalkanes and methods of treatment using these compounds
INVENTOR(S): Mazurov, Anatoly A.; Klucik, Jozef; Miao, Lan; Seamans, Angela S.; Phillips, Teresa Youngpeter; Schmitt, Jeffrey Daniel; Miller, Craig Harrison
PATENT ASSIGNEE(S): Targacept, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 38 pp., Cont.-in-part of U.S. Ser. No. 162,129.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004002513	A1	20040101	US 2003-372642	20030221
US 6953855	B2	20051011		
US 6432975	B1	20020813	US 1998-210113	19981211 <--
US 2003045523	A1	20030306	US 2002-162129	20020604
AU 2004215386	A1	20040910	AU 2004-215386	20040220
CA 2514135	A1	20040910	CA 2004-2514135	20040220
WO 2004076449	A2	20040910	WO 2004-US5044	20040220
WO 2004076449	A3	20041216		
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1594869	A2	20051116	EP 2004-713356	20040220
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BR 2004007708	A	20060214	BR 2004-7708	20040220
CN 1751041	A	20060322	CN 2004-80004736	20040220
JP 2006518746	T	20060817	JP 2006-503737	20040220
US 2005255040	A1	20051117	US 2005-157119	20050620
IN 2005KN01718	A	20070323	IN 2005-KN1718	20050829
NO 2005004052	A	20051021	NO 2005-4052	20050831
US 2006247270	A1	20061102	US 2006-458231	20060718

PRIORITY APPLN. INFO.:

US 1998-210113	A1	19981211
US 2002-162129	A2	20020604
US 2003-372642	A	20030221
WO 2004-US5044	A	20040220
US 2005-157119	A1	20050620

OTHER SOURCE(S): MARPAT 140:77298

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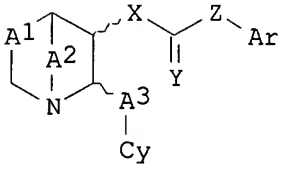

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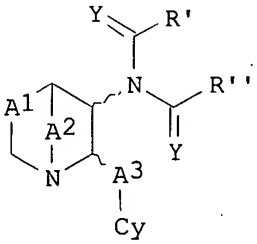

II

AB The present invention relates to 3-substituted-2-(arylalkyl)-1-azabicycloalkanes I [A1 = (CH2)n; A2 = (CH2)m; A3 = (CH2)p; m, n = 1, 2; p = 1 - 4; X = O, NR'; Z = NR', covalent bond, A; A = CR'R'', CR'R''CR'R'', CR':CR', C.tplbond.C (wherein, when Z = bond or A, X = N); Ar = (un)substituted carbocyclic, heterocyclic monocyclic or fused polycyclic aryl; Cy = (un)substituted 5- or 6-membered heteroarom. ring; wavy lines = relative or absolute stereochem. (cis or trans, R or S); R', R'' = H, (un)branched C1-8-alkyl, C3-8-cycloalkyl, heterocyclyl, aryl, arylalkyl {wherein, substituents = alkyl, alkenyl, heterocyclyl, cycloalkyl, (un)substituted aryl, (un)substituted arylalkyl, F, Cl, Br, I, OR', NR'R'', CF3, CN, NO2, C.tplbond.CR', SR', N3, C(:O)NR'R'', NR'C(:O)R'', C(:O)R', C(:O)OR', OC(:O)R', O(CR'R'')rC(:O)R', O(CR'R'')rNR''C(:O)R', O(CR'R'')rNR''SO2R', OC(:O)NR'R'', NR'C(:O)OR'', SO2R', SO2NR'R'',

NR'SO2R''}; R'R'' = ring; r = 1 - 6] and II, methods of preparing the compds. and methods of treatment using the compds. The azabicycloalkanes generally are azabicycloheptanes, azabicyclooctanes, or azabicyclononanes. The aryl group in the arylalkyl moiety is a 5- or 6-membered ring heteroarom., preferably 3-pyridinyl and 5-pyrimidinyl moieties, and the alkyl group is typically a C 1-4 alkyl. The substituent at the 3-position of the 1-azabicycloalkane is a carbonyl group-containing moiety, such as an amide, carbamate, urea, thioamide, thiocarbamate, thiourea or similar functionality. The compds. exhibit activity at nicotinic acetylcholine receptors (nAChRs), particularly the α7 nAChR subtype, and are useful towards modulating neurotransmission and the release of ligands involved in neurotransmission. Methods for preventing or treating conditions and disorders, including central nervous system (CNS) disorders, which are characterized by an alteration in normal neurotransmission, are also disclosed. Also disclosed are methods for treating inflammation, autoimmune disorders, pain and excess neovascularization, such as that associated with tumor growth.

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:964354 CAPLUS

DOCUMENT NUMBER: 138:24866

TITLE: Preparation and formulation of N-quinuclidinyl-heteroaryls as nicotinic acetylcholinergic receptor modulators for the treatment of a variety of central nervous system disorders

INVENTOR(S): Walker, Daniel P.; Wishka, Donn G.; Corbett, Jeffrey W.; Rauckhorst, Mark R.; Piotrowski, David W.; Groppi, Vincent E., Jr.

PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA

SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002100858	A2	20021219	WO 2002-US16570	20020606 <--
WO 2002100858	A3	20030220		
WO 2002100858	A8	20031224		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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AU 2002348503	A1	20021223	AU 2002-348503	20020606 <--
US 2003073707	A1	20030417	US 2002-163565	20020606
US 6828330	B2	20041207		
EP 1404674	A2	20040407	EP 2002-778934	20020606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004534065	T	20041111	JP 2003-503625	20020606
US 2004224977	A1	20041111	US 2004-865149	20040610
PRIORITY APPLN. INFO.:			US 2001-297629P	P 20010612

US 2001-297630P	P	20010612
US 2001-297631P	P	20010612
US 2001-297632P	P	20010612
US 2001-297633P	P	20010612
US 2001-328548P	P	20011011
US 2002-373496P	P	20020418
US 2002-163565	A3	20020606
WO 2002-US16570	W	20020606

OTHER SOURCE(S): MARPAT 138:24866
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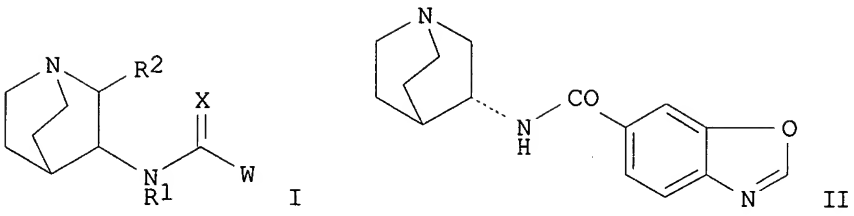

I II

AB N-quinuclidinyl-heteroaryls, such as amides I [R1 = H, alkyl, cycloalkyl, haloalkyl, aryl; R2 = H, benzyl, alkyl, haloalkyl, cycloalkyl, aryl; W = aryl, heteroaryl; X = O, S], were prepared for therapeutic use in the treatment of central nervous system disorders, such as cognitive and attention deficit symptoms of Alzheimer's, neurodegeneration associated with diseases such as Alzheimer's disease, pre-senile dementia (mild cognitive impairment), senile dementia, schizophrenia, psychosis, attention deficit disorder, attention deficit hyperactivity disorder, mood and affective disorders, amyotrophic lateral sclerosis, borderline personality disorder, traumatic brain injury, behavioral and cognitive problems associated with brain tumors, AIDS dementia complex, dementia associated with Down's syndrome, dementia associated with Lewy Bodies, Huntington's disease, depression, general anxiety disorder, age-related macular degeneration, Parkinson's disease, tardive dyskinesia, Pick's disease, post traumatic stress disorder, dysregulation of food intake including bulimia and anorexia nervosa, withdrawal symptoms associated with smoking cessation and dependent drug cessation, Gilles de la Tourette's Syndrome, glaucoma, neurodegeneration associated with glaucoma, or symptoms associated with pain. Thus, the fumarate salt of (3R)-N-quinuclidinyl amide II was prepared via the formation of 6-benzoxazolecarboxylic acid in 89% yield by cyclization of 4-amino-3-hydroxybenzoic acid and (MeO)3C at 100° for 2 h followed by amide formation of the acid with (R)-(+)-3-aminoquinuclidine dihydrochloride using DIEA in a 5:1 mixture of THF/DMF and subsequent fumarate salt formation. The prepared quinuclidine derivs. were assayed for nicotinic acetylcholinergic receptor binding activity using brain cell membrane prepared from male Sprague-Dawley rats.

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:964353 CAPLUS
DOCUMENT NUMBER: 138:24865
TITLE: Preparation and formulation of N-quinuclidinyl-heteroaryls as nicotinic acetylcholinergic receptor modulators for the treatment of a variety of central nervous system disorders
INVENTOR(S): Wishka, Donn G.; Reitz, Steven C.; Piotrowski, David W.; Groppi, Vincent E., Jr.
PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA
SOURCE: PCT Int. Appl., 262 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002100857	A1	20021219	WO 2002-US16568	20020606 <--
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2445467	A1	20021219	CA 2002-2445467	20020606 <--
US 2003045540	A1	20030306	US 2002-163564	20020606
US 7067515	B2	20060627		
EP 1406901	A1	20040414	EP 2002-778932	20020606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2002010384	A	20040629	BR 2002-10384	20020606
CN 1511154	A	20040707	CN 2002-809814	20020606
JP 2004537532	T	20041216	JP 2003-503624	20020606
ZA 2003008844	A	20040628	ZA 2003-8844	20031113

PRIORITY APPLN. INFO.:	US 2001-297708P	P	20010612
	US 2001-297709P	P	20010612
	US 2001-297710P	P	20010612
	US 2001-297711P	P	20010612
	US 2001-297712P	P	20010612
	US 2001-328596P	P	20011011
	US 2002-373495P	P	20020418
	WO 2002-US16568	W	20020606

OTHER SOURCE(S): MARPAT 138:24865
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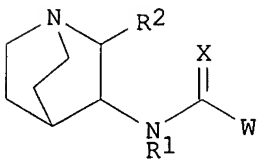

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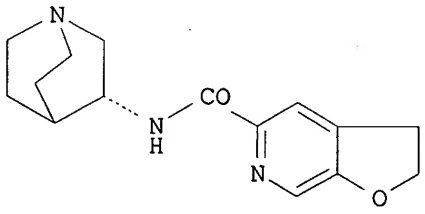

II

AB N-quinuclidinyl-heteroaryls, such as amides I [R1 = H, alkyl, cycloalkyl, haloalkyl, aryl; R2 = H, benzyl, alkyl, haloalkyl, cycloalkyl, aryl; W = heteroaryl; X = O, S], were prepared for therapeutic use in the treatment of central nervous system disorders, such as cognitive and attention deficit symptoms of Alzheimer's, neurodegeneration associated with diseases such as Alzheimer's disease, pre-senile dementia (mild cognitive impairment), senile dementia, schizophrenia, psychosis, attention deficit disorder, attention deficit hyperactivity disorder, mood and affective disorders, amyotrophic lateral sclerosis, borderline personality disorder, traumatic brain injury, behavioral and cognitive problems associated with brain tumors, AIDS dementia complex, dementia associated with Down's syndrome, dementia associated with Lewy Bodies, Huntington's disease, depression, general anxiety disorder, age-related macular degeneration, Parkinson's disease, tardive dyskinesia, Pick's disease, post traumatic

stress disorder, dysregulation of food intake including bulimia and anorexia nervosa, withdrawal symptoms associated with smoking cessation and dependent drug cessation, Gilles de la Tourette's Syndrome, glaucoma, neurodegeneration associated with glaucoma, or symptoms associated with pain. Thus, (3R)-N-quinuclidinyl amide II was prepared via a multistep synthetic sequence which started from 2-chloro-3-pyridinol and which included intramol. cyclization of 2-chloro-6-(hydroxymethyl)-4-[(trimethylsilyl)ethynyl]-3-pyridinol to form (7-chlorofuro[2,3-c]pyridin-5-yl)methanol in 27% yield using Et3N in EtOH, elaboration of the alc. to 2,3-dihydrofuro[2,3-c]pyridine-5-carboxylic acid, and, finally, amidation of the acid with (R)-(+)-3-aminoquinuclidine. The prepared quinuclidine derivs. were assayed for nicotinic acetylcholinergic receptor binding activity using brain cell membrane prepared from male Sprague-Dawley rats.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:927434 CAPLUS
DOCUMENT NUMBER: 138:14045
TITLE: Preparation of (2'R)-5'-(3-furanyl)spiro[1-azabicyclo[2.2.2]octane-3,2'(3'H)-furo[2,3-b]pyridine] as novel ligand for nicotinic acetylcholine receptors
INVENTOR(S): Phillips, Eifion
PATENT ASSIGNEE(S): Astrazeneca Ab, Swed.
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2002096912	A1	20021205	WO 2002-SE1031		20020529 <--
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CA 2455341	A1	20021205	CA 2002-2455341		20020529 <--
EP 1397366	A1	20040317	EP 2002-731063		20020529
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BR 2002010075	A	20040817	BR 2002-10075		20020529
JP 2004532877	T	20041028	JP 2003-500091		20020529
NZ 529426	A	20050729	NZ 2002-529426		20020529
AT 353332	T	20070215	AT 2002-731063		20020529
ZA 2003008779	A	20050211	ZA 2003-8779		20031111
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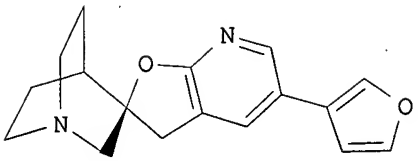

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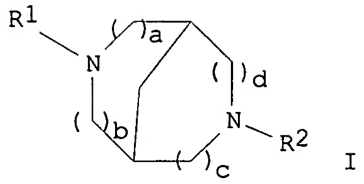
AB The title compound I.2HCl, useful in the treatment or prophylaxis of psychotic disorders or intellectual impairment disorders (no biol. data given), was prepared by bromination of (R)-spiro[1-azabicyclo[2.2.2]octane-3,2'(3'H)-furo[2,3-b]pyridine] followed by reacting the resulting 5'-bromo derivative with 3-furylboronic acid in the presence of Pd(PPh3)4 and Na2CO3 in H2O/EtOH/THF.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:927433 CAPLUS
DOCUMENT NUMBER: 138:14081
TITLE: Preparation of heteroaryl diazabicycloalkanes as central nervous system modulators
INVENTOR(S): Peters, Dan; Olsen, Gunnar M.; Nielsen, Elsebet Ostergaard; Ahring, Philip K.; Jorgensen, Tino Dyhring; Sloek, Frank Abildgaard
PATENT ASSIGNEE(S): Neurosearch A/S, Den.
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002096911	A1	20021205	WO 2002-DK347	20020523 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1397365	A1	20040317	EP 2002-724151	20020523
EP 1397365	B1	20050216		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004538268	T	20041224	JP 2003-500090	20020523
AT 289310	T	20050315	AT 2002-724151	20020523
US 2004147505	A1	20040729	US 2003-479348	20031201
PRIORITY APPLN. INFO.:			DK 2001-866 A	20010601
			WO 2002-DK347 W	20020523

OTHER SOURCE(S): MARPAT 138:14081
GI



I

AB The present invention relates to novel diazabicycloalkanes (shown as I; a/b/c/d = 1,1,1,1, 1,1,1,2, 1,1,2,1, 0,2,0,2 and 0,0,2,2; see below for addnl. definitions of variables; e.g. 3-benzyl-7-(6-phenyl-3-pyridazinyl)-3,7-diazabicyclo[3.3.1]nonane), their labeled or unlabeled forms, any of their enantiomers, any mixture of enantiomers, or pharmaceutically acceptable salts thereof or a prodrug thereof, which are cholinergic ligands at the nicotinic acetylcholine receptors and modulators of the monoamine receptors and transporters. Due to their pharmacol. profile the compds. of the invention may be useful for the treatment of diseases or disorders as diverse as those related to the cholinergic system of the central nervous system (CNS), the peripheral nervous system (PNS), diseases or disorders related to smooth muscle contraction, endocrine diseases or disorders, diseases or disorders related to neuro-degeneration, diseases or disorders related to inflammation, pain, and withdrawal symptoms caused by the termination of abuse of chemical substances. A diazabicycloalkane derivative = those represented by Formula I, by Formula II, by Formula III, by Formula IV, and by Formula V. For I: n = 1, 2 or 3; R1 = H, alkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkenylalkyl, alkynyl, alkynylalkyl, aryl, aralkyl or fluorescent group, which aryl groups may be substituted ≥1 times with substituents alkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, methylenedioxy, hydroxy, alkoxy, alkoxyalkyl, alkoxyalkoxy, aryloxy, sulfhydryl, thioalkoxy, alkylcarbonyloxy, halogen, CF3, OCF3, CN, and nitro; and/or which aryl groups may be substituted with ≥1 fluorescent groups. R2 = a mono- or polycyclic aryl group, or a mono- or poly-heterocyclic group, which aryl and heterocyclic groups may be substituted ≥1 times with substituents alkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, methylenedioxy, hydroxy, alkoxy, alkoxyalkyl, alkoxyalkoxy, aryloxy, sulfhydryl, thioalkoxy, alkylcarbonyloxy, halogen, CF3, OCF3, CN, and nitro; or which heterocyclic group may be substituted once with another mono- or poly-heterocyclic group, a mono- or polycyclic aryl group, or a mono- or polycyclic aralkyl group; and/or which heterocyclic group may be substituted with ≥1 fluorescent groups. Although the methods of preparation are not claimed, several example prepns. of I and intermediates are included and about 20 I are listed in the claims. Results for tabulated for two I regarding in vitro inhibition of 3H-5-Hydroxytryptamine (3H-5-HT, serotonin) uptake in cortical synaptosomes (e.g. IC50 = 0.022 μM for 3-benzyl-7-(2-quinolinyl)-3,7-diazabicyclo[3.3.1]nonane) and in vitro inhibition of 3H-cytisine binding (e.g. IC50 = 0.0030 for 7-(6-chloro-3-pyridazinyl)-3,7-diazabicyclo[3.3.1]nonane).

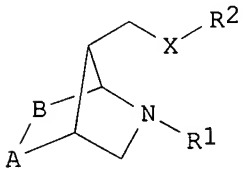
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:792020 CAPLUS
DOCUMENT NUMBER: 137:294878
TITLE: Preparation of 2-azabicyclo[2.2.1]heptanes as nicotinic acetylcholine receptor ligands
INVENTOR(S): Schiemann, Kai; Leibrock, Joachim
PATENT ASSIGNEE(S): Merck Patent GmbH, Germany
SOURCE: Ger. Offen., 16 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10118551	A1	20021017	DE 2001-10118551	20010414 <--
CA 2443577	A1	20021024	CA 2002-2443577	20020313 <--
WO 2002083640	A1	20021024	WO 2002-EP2729	20020313 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002304849	A1	20021028	AU 2002-304849	20020313 <--
EP 1379502	A1	20040114	EP 2002-732477	20020313
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
HU 200303980	A2	20040428	HU 2003-3980	20020313
JP 2004527534	T	20040909	JP 2002-581397	20020313
US 2004110788	A1	20040610	US 2003-474801	20031014
PRIORITY APPLN. INFO.:			DE 2001-10118551 A	20010414
			WO 2002-EP2729 W	20020313

OTHER SOURCE(S): MARPAT 137:294878
GI



I

AB Title compds. [I; A-B = (double) bond; X = O, NR3, S; R1 = H, (branched) alkyl, Ar, arylalkyl, Het, COR4, SO2R4, CSN(R4)2, CO2R4; R2 = (branched) alkyl, Ar, arylalkyl, Het, COR4, SO2R5, CSN(R5)2, CO2R4; R3-R5 = H, (branched) alkyl, cycloalkyl, Ar, arylalkyl; Ar = (substituted) Ph, naphthyl, biphenyl; Het = (unsatd.) (aromatic) (substituted) (bi)cyclic 5-10 membered heterocyclyl], were prepared as nicotinic acetylcholine receptor ligands (no data). Thus, (2-benzyl-2-azabicyclo[2.2.1]hept-7-yl)methanol in THF was treated with Et3N and benzoyl chloride followed by stirring for 18 h at room temperature to give 7-benzoyloxymethyl-2-benzyl-2-azabicyclo[2.2.1]heptane. The title compds. I are suitable for the prophylaxis or treatment of schizophrenia, depression, anxiety states, dementia, Morbus Alzheimer's disease, Lewy bodies dementia, neurodegenerative diseases, Parkinson's disease, Huntington's chorea, Tourette syndrome, learning and memory restrictions, alleviating of withdrawal symptoms of nicotine dependence, stroke or damage of the brain by toxic compds.

L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:672872 CAPLUS
DOCUMENT NUMBER: 137:305837
TITLE: Effect of nicotine and nicotinic receptors on anxiety and depression
AUTHOR(S): Picciotto, Marina R.; Brunzell, Darlene H.; Caldarone, Barbara J.

CORPORATE SOURCE: Department of Psychiatry, Yale University School of Medicine, New Haven, CT, 06508, USA
SOURCE: NeuroReport (2002), 13(9), 1097-1106
CODEN: NERPEZ; ISSN: 0959-4965
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Nicotine has been shown to have effects on anxiety and depression in both human and animal studies. These studies suggest that nicotinic acetylcholine receptors (nAChRs) can modulate the function of pathways involved in stress response, anxiety, and depression in the normal brain, and that smoking can result in alterations of the anxiety level and mood. The effects of nicotine are complex, however, and nicotine treatment can be either anxiolytic or anxiogenic depending on the anxiety model tested, the route of nicotine administration, and the time course of administration. The paradoxical effects of nicotine on emotionality are likely due to the broad expression of nAChRs throughout the brain, the large number of nAChR subtypes that have been identified, and the ability of nicotine treatment to both activate and desensitize nAChRs. Activation of nAChRs has been shown to modulate many systems associated with stress response including stress hormone pathways, monoaminergic transmission, and the release of classical neurotransmitters throughout the brain. Local administration studies in animals have identified brain areas that may be involved in the anxiogenic and anxiolytic actions of nicotine including the lateral septum, the dorsal raphe nuclei, the mesolimbic dopamine system, and the hippocampus. The ensemble of studies to date suggest that under certain conditions nicotine can act as an anxiolytic and an antidepressant, but that following chronic use, adaptations to nicotine can occur resulting in increased anxiety and depression following withdrawal.

REFERENCE COUNT: 164 THERE ARE 164 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:421769 CAPLUS
DOCUMENT NUMBER: 136:383676
TITLE: Involvement of neuronal nicotinic receptor in psychiatric disorders
AUTHOR(S): Suemaru, Katsuya; Araki, Hiroaki; Gomita, Yutaka
CORPORATE SOURCE: Department of Hospital Pharmacy, Okayama University Medical School, Okayama, 700-8558, Japan
SOURCE: Nippon Yakurigaku Zasshi (2002), 119(5), 295-300
CODEN: NYKZAU; ISSN: 0015-5691
PUBLISHER: Nippon Yakuri Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A review. Neuronal nicotinic acetylcholine receptors (nAChR) are a family of ligand-gated ion channels that have a pentameric structure composed of five membrane spanning subunits. Recent progress in clin. and neurochem. studies have shown that neuronal nAChR are involved in some psychiatric disorders such as schizophrenia, depression, and anxiety via its stimulating effect of multiple neurotransmitters. It has been suggested that the high prevalence of smoking in the patients with psychiatric disorders is an attempt to alleviate some psychiatric symptoms using the central stimulatory effect of nicotine (a self-medication effort) or to alleviate the exacerbated symptoms by nicotine withdrawal. Moreover, recent studies with mutant mice lacking specific nAChR subunits and animal models of psychiatric disorders have indicated the psychopharmacol. role of individual nAChR subunits in psychiatric disorders. Thus, it is suggested that α7 nAChR is involved in the attention deficit of schizophrenic patients and that α4β2 nAChR is related to nicotine dependence

or the withdrawal symptoms.

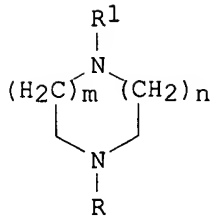
L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:293427 CAPLUS
DOCUMENT NUMBER: 136:325574
TITLE: Preparation of piperazine, homopiperazine, and 8-azabicyclo[3.2.1]oct-2-ene, and 3,9-diazabicyclo[4.2.1]nonane derivatives for treatment of affective disorders by the combined action of a nicotinic receptor agonist and a monoaminergic substance
INVENTOR(S): Olsen, Gunnar M.; Peters, Dan; Nielsen, Elsebet Ostergaard
PATENT ASSIGNEE(S): Neurosearch A/S, Den.
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002030405	A2	20020418	WO 2001-DK661	20011010 <--
WO 2002030405	A3	20020906		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2425638	A1	20020418	CA 2001-2425638	20011010 <--
AU 200195436	A	20020422	AU 2001-95436	20011010 <--
EP 1358177	A2	20031105	EP 2001-976043	20011010
EP 1358177	B1	20060802		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004510813	T	20040408	JP 2002-533848	20011010
NZ 524202	A	20040827	NZ 2001-524202	20011010
CN 1635877	A	20050706	CN 2001-816803	20011010
AT 334979	T	20060815	AT 2001-976043	20011010
PT 1358177	T	20060929	PT 2001-976043	20011010
EP 1757600	A2	20070228	EP 2006-116505	20011010
R: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE, TR, AL, BA, HR, MK, YU				
US 2004092508	A1	20040513	US 2003-380653	20030317

PRIORITY APPLN. INFO.:

DK 2000-1535	A	20001013
US 2000-242146P	P	20001023
EP 2001-976043	A3	20011010
WO 2001-DK661	W	20011010

OTHER SOURCE(S): MARPAT 136:325574
GI



I

II

AB This invention relates to use of the combined action of a nicotinic acetylcholine receptor agonist and a monoamine reuptake inhibitor for the treatment of affective disorders including depression, anxiety, obsessive compulsive disorder (OCD), panic disorder, or pain, as well as to pharmaceutical compns. comprising these substances and chemical substances for use according to the invention. The chemical substances are represented by piperazine and homopiperazine derivs. (I; n = 1,2,3; m = 0,1,2; R = H, alkyl, cycloalkyl, cycloalkylalkyl, alkoxy, acyl, benzyl; R1 = 5-bromo-3-pyridyl, 6-chloro-3-pyridyl, 6-bromo-5-methoxy-3-pyridyl, 6-bromo-3-pyridyl, 6-bromo-5-chloro-3-pyridyl, 5,6-dibromo-3-pyridyl, etc.) and 8-azabicyclo[3.2.1]oct-2-ene derivs. (II; R = H, alkyl, alkenyl, cycloalkyl, cyanoalkyl, Ph, naphthyl, benzyl; R1 = CHO, alkanoyl, cycloalkanoyl, carbamoyl, furanyl, thienyl, pyrrolyl, oxazolyl, isoxazolyl, imidazolyl, pyridyl, pyrimidinyl, thiazolyl, naphthyl, indolyl, benzofuranyl, etc.). Thus, 1-(6-Chloro-3-pyridyl)piperazine (III) (0.3, 1, 3, 10 mg/kg s.c.) was tested in the mouse forced swim test which is considered predictive of a potential antidepressant pharmacol. effect and it did not affect forced swimming with a 30 min pretreatment. However, the combination of venlafaxine and III (1+3; 3+3; 10+1; 10+3 mg/kg s.c.) significantly increased the forced swimming in NMRI mice.

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:178016 CAPLUS
DOCUMENT NUMBER: 137:15111
TITLE: Neuronal nicotinic receptor and psychiatric disorders: functional and behavioral effects of nicotine
AUTHOR(S): Araki, Hiroaki; Suemaru, Katsuya; Gomita, Yutaka
CORPORATE SOURCE: Department of Hospital Pharmacy, Okayama University Medical School, Okayama, 700-8558, Japan
SOURCE: Japanese Journal of Pharmacology (2002), 88(2), 133-138
CODEN: JJPAAZ; ISSN: 0021-5198
PUBLISHER: Japanese Pharmacological Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Both retrospective and prospective clin. studies have demonstrated pos. assocns. of smoking with psychiatric disorders such as schizophrenia, depression and anxiety. Neuronal nicotinic acetylcholine receptors (nAChR) belong to a family of ligand-gated ion channels that are widely distributed in the brain. The pre-synaptically located nAChR, which are composed of α3 or α4 subunits in combination with β2 subunit on axon terminals, modulate the multiple transmission release. Several studies indicated which individual nicotinic receptor subtype is responsible for mediating each of the behavioral effects of nicotine. A reduced number of α7 nicotinic receptor subtypes in the hippocampus were reported in schizophrenic patients. In addition, it was assumed that nicotine provided useful therapeutic treatment for a variety of cognitive impairments including those found in Alzheimer's disease, schizophrenia and attention deficit hyperactive disorder. Both α7 and α4β2 nicotinic receptors in the hippocampus are involved in these phenomena. In the genetic depressive rats, nicotine showed

antidepressant-like effects in forced swim models of depression, suggesting the involvement of α4β2 nicotinic receptor in this phenomenon. Thus, it appears likely that pre-synaptic nAChR on monoaminergic fibers are composed of α3 or α4 subunits in combination with the β2 subunit, and these subunit compns. mediate dopaminergic and noradrenergic release, and glutamate is mainly controlled by the α7 subunit. All these findings suggest that nicotine and other nicotinic drugs warrant further study for possible clin. prescription to psychiatric disorders.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:158129 CAPLUS

DOCUMENT NUMBER: 136:200338

TITLE: Preparation of N-quinuclidinyl-heteroaryl amides for pharmaceutical use in the treatment of neurological disorders

INVENTOR(S): Myers, Jason K.; Rogers, Bruce N.; Groppi, Vincent E., Jr.; Piotrowski, David W.; Bodnar, Alice L.; Jacobsen, Eric Jon; Corbett, Jeffrey W.

PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA

SOURCE: PCT Int. Appl., 247 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002017358	A2	20020228	WO 2001-US21139	20010817 <--
WO 2002017358	A3	20020530		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001082875	A5	20020304	AU 2001-82875	20010817 <--
US 2002042428	A1	20020411	US 2001-932309	20010817 <--
US 6492385	B2	20021210		
US 2002042429	A1	20020411	US 2001-932612	20010817 <--
US 6500840	B2	20021231		

PRIORITY APPLN. INFO.:

US 2000-226652P	P	20000821
US 2001-284849P	P	20010419
US 2001-284850P	P	20010419
US 2001-284967P	P	20010419
US 2000-226164P	P	20000818
US 2001-284832P	P	20010419
WO 2001-US21139	W	20010817

OTHER SOURCE(S): MARPAT 136:200338

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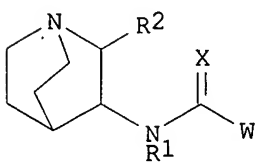

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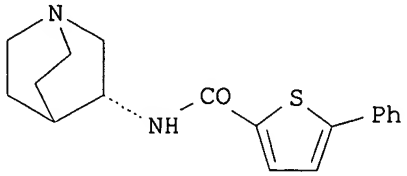

II

AB N-quinuclidinyl-heteroaryl amides, such as I [R1 = H, alkyl, cycloalkyl, haloalkyl, aryl; R2 = H, benzyl, alkyl, haloalkyl, cycloalkyl, aryl; W = heteroaryl; X = O, S], were prepared for therapeutic use in the treatment of neurol. disorders, such as attention deficit disorder, attention deficit hyperactivity disorder, mood and affective disorders, amyotrophic lateral sclerosis, borderline personality disorder, traumatic brain injury, behavioral and cognitive problems associated with brain tumors, AIDS dementia complex, dementia associated with Down's syndrome, dementia associated with Lewy Bodies, Huntington's disease, depression, general anxiety disorder, age-related macular degeneration, Parkinson's disease, tardive dyskinesia, Pick's disease, post traumatic stress disorder, dysregulation of food intake including bulimia and anorexia nervosa, withdrawal symptoms associated with smoking cessation and dependent drug cessation, Gilles de la Tourette's Syndrome, glaucoma, neurodegeneration associated with glaucoma, or symptoms associated with pain. Thus, the hydrochloride salt of quinuclidine carboxamide II was prepared in 57% yield by an amidation reaction of (3R)-3-aminoquinuclidine hydrochloride and 5-phenylthiophene-2-carboxylic acid using di-Ph chlorophosphate and Et3N in CH2Cl2 and DMF/H2O (5:1). The prepared quinuclidinyl amides were tested for nicotinic acetylcholine receptor binding activities.

L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:157768 CAPLUS
DOCUMENT NUMBER: 136:200335
TITLE: Preparation of N-quinuclidinyl-aryl amides for pharmaceutical use in treatment of neurol. disorders
INVENTOR(S): Myers, Jason K.; Groppi, Vincent E., Jr.; Piotrowski, David W.
PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA
SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002016356	A2	20020228	WO 2001-US21136	20010817 <--
WO 2002016356	A3	20020516		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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AU 2001084645	A5	20020304	AU 2001-84645	20010817 <--
US 2002042428	A1	20020411	US 2001-932309	20010817 <--
US 6492385	B2	20021210		
US 2002052389	A1	20020502	US 2001-932325	20010817 <--
US 6492386	B2	20021210		

PRIORITY APPLN. INFO.:		
US 2000-226164P	P	20000818
US 2001-284956P	P	20010419
US 2001-284968P	P	20010419
US 2001-284971P	P	20010419
US 2000-226652P	P	20000821
US 2001-284832P	P	20010419
WO 2001-US21136	W	20010817

OTHER SOURCE(S): MARPAT 136:200335
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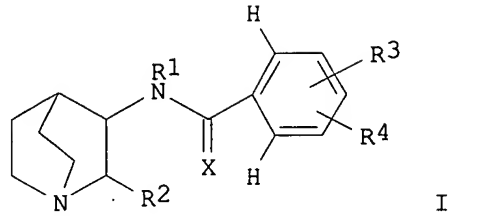

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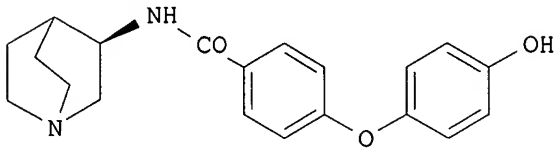

II

AB N-quinuclidinyl-aryl amides, such as I [R1 = H, alkyl, cycloalkyl, haloalkyl, aryl; R2 = H, alkyl, haloalkyl, cycloalkyl, benzyl, aryl; R3, R4 = H, alkyl, alkenyl, alkynyl, alkoxy, aryloxy, amino, alkylthio, acyl, sulfamoyl, etc.; X = O, S], were prepared for therapeutic use in the treatment of neurol. disorders, such as attention deficit disorder, attention deficit hyperactivity disorder, mood and affective disorders, amyotrophic lateral sclerosis, borderline personality disorder, traumatic brain injury, behavioral and cognitive problems associated with brain tumors, AIDS dementia complex, dementia associated with Down's syndrome, dementia associated with Lewy Bodies, Huntington's disease, depression, general anxiety disorder, age-related macular degeneration, Parkinson's disease, tardive dyskinesia, Pick's disease, post traumatic stress disorder, dysregulation of food intake including bulimia and anorexia nervosa, withdrawal symptoms associated with smoking cessation and dependent drug cessation, Gilles de la Tourette's Syndrome, glaucoma, neurodegeneration associated with glaucoma, or symptoms associated with pain. Thus, benzamide II was prepared in 60% yield by an amidation reaction of (R)-3-aminoquinuclidine with 4-(4-acetoxyphenoxy)benzoic acid using di-Ph chlorophosphate and Et3N in CH2Cl2 and DMF. The prepared N-quinuclidinyl amides were tested for nicotinic acetylcholine receptor binding activity.

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:300714 CAPLUS
DOCUMENT NUMBER: 134:311118
TITLE: Preparation and nicotinic acetylcholine receptor agonist activity of quinuclidine acrylamides
INVENTOR(S): Schmiesing, Richard
PATENT ASSIGNEE(S): Astrazeneca Ab, Swed. .
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001029034	A1	20010426	WO 2000-SE1993	20001013 <--

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SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1235826	A1	20020904	EP 2000-971959		20001013 <--
EP 1235826	B1	20030903			
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JP 2003512374	T	20030402	JP 2001-531833		20001013
AT 248837	T	20030915	AT 2000-971959		20001013
PT 1235826	T	20040130	PT 2000-971959		20001013
ES 2204711	T3	20040501	ES 2000-971959		20001013
US 6642246	B1	20031104	US 2002-110663		20020415
HK 1048313	A1	20031224	HK 2003-100456		20030117
PRIORITY APPLN. INFO.:			SE 1999-3760	A	19991018
			WO 2000-SE1993	W	20001013

OTHER SOURCE(S): MARPAT 134:311118
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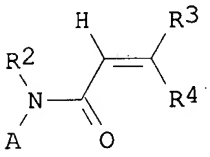

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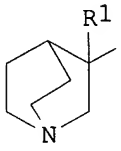

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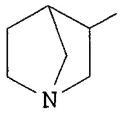

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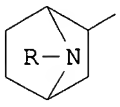

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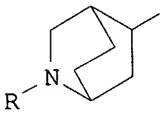

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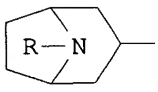

VI

AB The title compds. I (A = II, III, IV, V or VI; R = H or Me; R1, R2 = independently H, or C1-C4 alkyl; R3 and R4 = independently H, C1-C4 alkyl or SAr, provided that at least one of R3 and R4 represents SAr; Ar = 5- or 6-membered aromatic or heteroarom. ring containing 0-3 N atoms, 0-1 O atom, and 0
or 1 S atom or an 8-, 9- or 10-membered fused aromatic or heteroarom. ring system containing 0-4 N atoms, 0-1 O atom, and 0-1 S atom which may optionally be substituted with one or more substituents selected from: H, halo, C1-C4 alkyl, C2-C4 alkenyl, C2-C4 alkynyl, aryl, heteroaryl, -CO2R5, -CN, -NO2, -NR6R7, -CF3, -OR8; R5, R6, R7, and R8 = independently H, C1-C4 alkyl, aryl, heteroaryl, -C(O)R9, -C(O)NHR10, -C(O)R11, -SO2R12, or, R6 and R7 may together be (CH2)jQ(CH2)k where Q is O, S, NR13, or, a bond; j is 2 to 7; k is 0 to 2; R9, R10, R11, R12, and R13, are independently C1-C4 alkyl, aryl, or heteroaryl) and enantiomers and the pharmaceutically acceptable salts were prepared as pharmaceutical compns. for therapy, especially in the treatment or prophylaxis of psychotic disorders and intellectual impairment disorders. Thus, (R)-1-azabicyclo[2.2.2]oct-3-ylamine dihydrochloride was reacted with 3-(phenylthio)-acrylic acid in the presence of 1-hydroxybenzotriazole hydrate and O-benzotriazol-1-yl-N,N,N',N'-tetramethyluronium tetrafluoroborate to provide (R)-N-(1-azabicyclo[2.2.2]oct-3-yl)[Z-3-(phenylthio)propenamide] hydrochloride after acidification and recrystn. from i-PrOH. I have binding affinities (Ki) of less that 1000 nM in assays for affinity at α7 and α4 nicotinic acetylcholine
receptors, indicating that they are expected to have useful therapeutic activity.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:237731 CAPLUS
DOCUMENT NUMBER: 133:53562
TITLE: Recombinant human receptors and functional assays in the discovery of altinicline (SIB-1508Y), a novel acetylcholine-gated ion channel (nAChR) agonist
AUTHOR(S): Cosford, N. D. P.; Bleicher, L.; Vernier, J.-M.; Chavez-Noriega, L.; Rao, T. S.; Siegel, R. S.; Suto, C.; Washburn, M.; Lloyd, G. K.; McDonald, I. A.
CORPORATE SOURCE: Merck Research Laboratories San Diego, La Jolla, CA, USA
SOURCE: Pharmaceutica Acta Helvetiae (2000), 74(2-3), 125-130
CODEN: PAHEAA; ISSN: 0031-6865
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Neuronal nicotinic acetylcholine receptors (nAChRs) are a class of ion channels with significant potential as mol. targets for the design of drugs to treat a variety of CNS disorders. The discovery that neuronal nAChRs are further subdivided into multiple subtypes suggests that drugs which act selectively at specific nAChR subtypes might effectively treat Parkinson's disease (PD), Alzheimer's disease (AD), schizophrenia, ADHD, depression, anxiety or pain without the accompanying adverse side effects associated with non-selective agents such as nicotine (1) and epibatidine. Altinicline (SIB-1508Y) is a novel, small mol. designed to selectively activate neuronal nAChRs and is undergoing clin. evaluation for the treatment of PD. It was selected from a series of compds. primarily on the basis of results from functional assays, including (a) measurement of Ca2+ flux in stable cell lines expressing specific recombinant human neuronal nAChR subtypes; (b) determination of in vitro and in vivo neurotransmitter release; (c) in vivo models of PD. Biol. data on both altinicline and the series of compds. from which it was selected are reported.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.92	56.13
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-11.70	-11.70

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Apr 13, 2007 (20070413/UP).

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(FILE 'HOME' ENTERED AT 14:45:09 ON 16 APR 2007)

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L1 6901 S NICOTINIC ACETYLCHOLIN? RECEPTOR?
L2 4833 S L1 AND PY<2003

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L3            65 S L2 AND DEPRESSION?
L4            15 S L3 AND ANXIETY

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